



Exotic Plant Control

Introduction

Shenandoah National Park began its exotic plant management program in 1997. Since that time, Shenandoah's program has expanded although its long-term existence is tenuous due to lack of funding. These early efforts, were, however, very successful in establishing the foundation for what is now the Mid-Atlantic Exotic Plant Management Team. The Mid-Atlantic Team is stationed at Shenandoah and provides survey and control services to Shenandoah and other parks in the region.

Management Needs

Exotic plants replace native plants and can adversely affect associated animal life. These shifts are undesirable from a biodiversity perspective. Although some exotic plants function as equivalent surrogates for native species, ecosystem function and character can change inappropriately as exotic plants expand. Exotic plant species also alter the condition of cultural landscapes and can damage structures, fences, and other facilities.

Current Procedures

A variety of control techniques are used at Shenandoah. Decisions regarding which technique is used hinge on the biology of the particular plant that is being tackled.

- Manual control: hand pulling
- Mechanical: hand cutting with loppers, trimmers & hand saws, and motorized cutting with chainsaws and weed whackers
- Herbicide applications:
 - Foliar (leaves) using glyphosate or triclopyr or herbicidal soap 2-5%/water 95-98%
 - Basal (stems & trunks) using triclopyr 20%/oil 80%
 - Cut-stump (stump cambium layer) using triclopyr 20%/oil 80%
 - Injection (stems & trunks) using E-Z-JectR with glyphosate 100%
- Prescribed fire: ground fire is used to burn off vines and undergrowth in heavily infested areas to allow subsequent field work

A Draft Exotic Plant Management Plan has been prepared for the park. This plan describes the scope of the problem and outlines a strategy for targeting the most threatening plants. Control actions have been achieved by park personnel, volunteers, Student Conservation Association resource assistants, and park neighbors.

Accomplishments

During the period FY 1998-2004, the Park obtained funding for 10 separate control projects, controlling 12 exotic species on 1,245 acres. Park staff successfully eradicated Johnson grass in 2000.

Minimal exotic plant control activity is planned in FY2005 due to the lack of project funding.



Park employee applying herbicide.

References

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Exotic Plant Control (continued...)

Table of Treatment, Retreatment, Monitoring, and Staffing of the Shenandoah National Park Exotic Plant Management Program (Control & Effectiveness Monitoring)

Fiscal Year	Initial Treatment Acres	Retreatment Acres	Treatment Monitoring Sites	Field Staff Dedicated to Exotic Plant Control & Monitoring (FTE)
1998	0.3	0	0 of 1	0
1999	66.8	5.6	0 of 12	0.8
2000	69.4	66.6	12 of 39	1.3
2001	402.4	340.0	12 of 147	2.5
2002	133.8	460.0	12 of 165	1.8
2003	15.8	271.2	13 of 168	1.8
2004	556.4	257.6	13 of 171	2.7
Totals	1,244.9	1,401.0	n/a	10.9

